<div align="center">

IUBMB Enzyme Nomenclature

EC 4.2.1.30

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Common name: glycerol dehydratase

Reaction: glycerol = 3-hydroxypropanal + H_2O

Other name(s): glycerol dehydrase

Systematic name: glycerol hydro-lyase

Comments: Requires a cobamide coenzyme.

Links to other databases: BRENDA, EXPASY, KEGG, WIT, CAS registry number: 9077-68-3

References:

1. Forage, R.G. and Foster, M.A. Glycerol fermentation in *Klebsiella pneumoniae*: functions of the coenzyme B_{12}-dependent glycerol and diol dehydratases. *J. Bacteriol.* 149 (1982) 413-419. [Medline UI: 82119943]

2. Schneider, Z., Larsen, E.G., Jacobsen, G., Johnson, B.C. and Pawelkiewicz, J. Purification and properties of glycerol dehydrase. *J. Biol. Chem.* 245 (1970) 3388-3396. [Medline UI: 70293158]

3. Schneider, Z. and Pawelkiewicz, J. The properties of glycerol dehydratase isolated from *Aerobacter aerogenes,* and the properties of the apoenzyme subunits. *Acta Biochim. Pol.* 13 (1966) 311-328. [Medline UI: 67124546]

4. Smiley, K.L. and Sobolov, M. A cobamide-requiring glycerol dehydrase from an acrolein-forming *Lactobacillus. Arch. Biochem. Biophys.* 97 (1962) 538-543.

<div align="center">

[EC 4.2.1.30 created 1972]

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(FILE 'HOME' ENTERED AT 10:45:40 ON 09 DEC 2002)

FILE 'REGISTRY' ENTERED AT 10:46:16 ON 09 DEC 2002
L1   51132 S 1,3-PROPANEDIOL
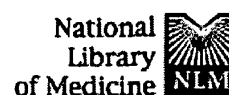L2   1 S 1,3-PROPANEDIOL/CN

FILE 'MEDLINE, AGRICOLA, CAPLUS, BIOSIS, EMBASE, WPIDS' ENTERED AT
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FILE 'MEDLINE, AGRICOLA, CAPLUS, BIOSIS, EMBASE, WPIDS' ENTERED AT
10:48:46 ON 09 DEC 2002
L3   89227 S PROPANEDIOL OR (PROPYLENE (W) GLYCOL) OR DIHYDROXYPROPANE OR
L4   58 S L3 AND THERMOPHIL?
L5   22 S L4 AND GLYCEROL
L6   14 DUP REM L5 (8 DUPLICATES REMOVED)
L7   332 S GLYCEROL (W) DEHYDRATASE
L8   2 S L7 AND (THERMOPHIL? OR ((HEAT OR TEMPERATURE) (W) RESISTANT)

=>

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	6523	thermophil$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/09 10:30
2	L2	44	l1 and glycerol.ab.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/09 10:44
3	L3	5	l1 and (glycerol near5 1,3-propanediol)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/09 11:05
4	L4	32	glycerol adj dehydratase	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/09 11:05
5	L5	7	l4 and (THERMOPHIL$ OR ((HEAT OR TEMPERATURE) adj RESISTANT))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/09 11:06

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#20	Search **#15 AND temperature**	11:10:18	5
#17	Search **#15 AND thermophile**	11:10:12	0
#18	Search **#15 AND heat**	11:09:52	1
#16	Search **#15 AND thermophilic**	11:09:32	0
#15	Search **glycerol dehydratase**	11:09:14	54
#7	Search **#5 AND glycerol**	10:12:44	14
#5	**Related Articles** for PubMed (Select 12148625)	10:10:37	112
#3	Search **glycerol and thermophilic and 1,3-propanediol**	10:09:39	1
#2	Search **glycerol and thermophilic**	10:09:22	67
#1	Search **glycerol and thermophlic**	10:09:22	38767

Clear History

i686-pc-linux-gnu Dec 2 2002 12:27:48